

IUBMB Enzyme Nomenclature

EC 3.4.23.4

Common name: chymosin

Reaction: Broad specificity similar to that of pepsin A. Clots milk by cleavage of a single Ser-Phe¹⁰⁵ + Met-Ala bond in -chain of casein

Other names: rennin (but this should be avoided since it leads to confusion with renin)

Comments: Neonatal gastric enzyme with high milk clotting and weak general proteolytic activity, formed from prochymosin. Found among mammals with postnatal uptake of immunoglobulins. In peptidase family A1(pepsin A family)

Links to other databases: [BRENDA](#), [EXPASY](#), [GTD](#), [MEROPS](#), CAS registry number: 9001-98-3

References:

1. Foltmann, B. A review of prorennin and rennin. *C. R. Trav. Lab. Carlsberg* 35 (1966) 143-231. [Medline UI: [67007289](#)]
2. Harris, T.J.R., Lowe, P.A., Lyons, A., Thomas, P.G., Eaton, M.A.W., Millican, T.A., Patel, T.P., Bose, C.C., Carey, N.H. and Doel, M.T. Molecular cloning and nucleotide sequence of cDNA coding for calf preprochymosin. *Nucleic Acids Res.* 10 (1982) 2177-2187. [Medline UI: [82221400](#)]
3. Visser, S., Slangen, C.J. and van Rooijen, P.J. Peptide substrates for chymosin (rennin). Interaction sites in *k*-casein-related sequences located outside the (103-108)-hexapeptide region that fits into the enzyme's active-site cleft. *Biochem. J.* 244 (1987) 553-558. [Medline UI: [88183212](#)]

[EC 3.4.23.4 created 1961 as EC 3.4.4.3, transferred 1972 to EC 3.4.23.4, modified 1986]

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